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ABSTRACT

This paper is a preliminary examination of historical shifts in U.S. discourses of school architecture as they relate to curricular reforms and inventions on new pedagogical techniques. The paper begins by sketching the current parameters of discourses on school architecture and notes some of the key arguments of reform taken up by educators and educational designers. It then conceptualizes the "space" of the school as discursive. To understand how the "space" of the school represents different forms of governmentality, the paper examines the governing discourses of the common school-house to compare it to the reasoning in the 1920s. Finally, the paper speculates upon how "individualized instruction" has "come of age" in current discourses of school design. As a strategy of discursive analysis, the paper uses Michel Foucault's conceptualization of "governmentality" and related scholarship to examine discourses on school architecture to question current assumptions underlying claims about new school designs. By using "governmentality" as a field of analysis, the paper locates particular historical junctures that provide the contingent conditions and reasonings upon which the current debates about reform of school design seem reasonable and make sense. The paper states that, schematically, the historical junctures are: (1) the common school discourses of the 19th century "school-house"; (2) the emergence of the "school-plant" in the 1920s and 1930s that standardized and systematized school building; (3) the "open-plan" in the 1950s that followed as a critique of the "school-plant"; and (4) the enfolding and redeployment of elements of all the previous plans in the "school-as-community." Contains 73 references and 15 notes. (BT)

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From 'School-House' to 'School-as-Community':
Governmentality and the Space of the School

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Overview

This paper is a preliminary examination of historical shifts in U.S. discourses of school architecture as they relate to curricular reforms and inventions of new pedagogical techniques. I begin by sketching the current parameters of discourses on school architecture and note some of the key arguments of reform taken up by educators and educational designers. Next, I conceptualize the 'space' of the school as discursive. Third, to understand how the 'space' of the school represents different forms of governmentality, I examine the governing discourses of the common school-house to compare it to the reasoning in the 1920s. Finally, I speculate upon how 'individualized instruction' has 'come of age' in current discourses of school design.

My strategy of discursive analysis uses Michel Foucault's conceptualization of 'governmentality' and related scholarship to examine discourses on school architecture. The purpose is to question current assumptions underlying claims about new school designs. By using 'governmentality' as a field of analysis, I locate particular historical junctures that provide the contingent conditions and reasonings upon which the current debates about reform of school design seem reasonable and make sense. Schematically, the historical junctures are: (1) the common school discourses of the "school-house" during the nineteenth century; (2) the emergence of the "school-plant" in the 1920s and 30s that standardized and systematized school building; (3) the "open-plan" in the 1950s that followed as a critique of the "school-plant"; and (4) the enfolding and redeployment of elements of the "school-house," "school-plant" and the "open-plan" in the "school-as-community."

Outline

I. Flexible, Active, and Personal: The School-as-Community for the 21st Century
II. Two Uses of 'Space': a Space of 'Political Reasoning' about the Space of the 'School'
III. The Convergence of Multiple Governing Discourses in the Common School-House
IV. A Shift in Governmental Reasoning: Population and 'Planning' the 'Future'
V. "Dividuated" Development, or Has Individualized Instruction 'Come of Age' in the School-as-Community?

From 'School-House' to 'School-as-Community':
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Currently, schools across the nation must address the problems of global, national, and generational fluctuations in populations (see, e.g., Istance, 1994, who describes broad educational concerns for social inclusion). While some school districts are attempting to absorb increases in enrollment, other schools are abandoned. Issues of building new schools and retrofitting existing structures come to the fore. These same issues presented both challenges and opportunities periodically through the nineteenth and twentieth centuries, but the discourses have changed dramtically. As an organizing gesture and for convenience, I characterize current discourses on school architecture as the school-as-community to distinguish it from past conceptualizations of the school (see also Morris, 1996).

Flexible, Active, and Personal: The School-as-Community for the 21st Century

School architecture discourses incorporate broad trends of educational reform. For example, a realignment of subject matter, such as an integrated curriculum, is attached to pedagogical reforms (such as teacher mentoring and cooperative grouping). Curricular and pedagogical reforms are designed to provide appropriate instruction for multiple learning styles, multiple intelligences, stages of development and various disabilities. The confluence of multiple discourses coalesce in a mandate to build schools as "flexible learning environments" (Petit, 1997; American School & University, 1998; Langone, 1998; Hood-Smith & Leffingwell, 1983; Waltenspuhl, 1994). New floor plans, alone, do not convey the convergence of discursive elements. Building a "flexible learning environment" requires new networks of relations achieved through re-partitioning and re-distributing rooms, staff, students, furniture and media. According to architectural and educational studies of school building and design, a "flexible learning environment" is "interactive" and promotes "active" learning through a sense of "community."

The label of school-as-community does not refer to a model because there are currently at least three architectural models through which discourses on flexibility, interaction, and community flow: the "open school," the "pod school" and the "classroom school" (Goldberg, 1991). Each of the models is thought to serve at least some aspects of flexibility and active learning in a school-as-community. Let me briefly describe each model.

The open school has few built-in features; instead, furniture, storage carts and partitions are movable fixtures and modules by which the space quickly and easily can be partitioned and sub-divided into a 'flexible space' of open and enclosed areas to fit the day-to-day changes in student groupings and activities. There are no corridors in the open school; modifiable circulation paths are meant to carry students directly from one activity to another to diminish the amount of 'non-educational' time and to expose students to a variety of activities and opportunities in the school community (Moore & Lackney, 1994; Goldberg, 1991; see also Pearson, 1975, and Propst, 1972, for earlier articulations of the "open plan").

The pod school is discussed as a way to subdivide large, densely populated urban schools into smaller and more personal groupings and activities that allow a sense of community to flourish (Goldberg, 1991; OECD, 1996). Frequently, the arrangements of school space in the pod school are described as a "town" or "community" in which "streets" replace the former "corridor." Rather than efficiently circulating the school population to their proper destinations through hallways, school "streets" are used as common areas to congregate, socialize, or to display student work. Names of "streets" help arrange the school into "neighborhoods" and "home-like" classroom suites. The intent is "to create an intimate scale that promotes interaction and cooperation amongst students and teachers" (Steubing, 1995, p. 53).

And finally, the classroom school is usually described as the traditional or conventional model in which an administrative center is winged by corridors lined with standardized classrooms. The space is divided into age-grade and subject-matter classifications. Often scorned and despised as the "egg-crate" plan or the "big box," the classroom school remains a viable and valued model in reform discourses of "inclusion," "multi-age" and "mixed-grade" classifications and groupings (Goldberg, 1991; American School & University, 1998; Reisberg, 1998). The problem of flexibility in providing spaces for active learning and to promote community relations both within and outside the classroom school frequently are resolved in discourses of technology in which electronically mediated instruction reorganizes the classroom (e.g., OECD, 1996).

Regardless of model and contrasting spatial configurations, the school-as-community is conceptualized as a "flexible learning environment" that promotes interaction, active learning, and a sense of a personal stake in the school, in the larger community, and in the global environment. In a rhetoric of freeing up the space of the school, school architecture discourses situate the space of the school, at best, as politically neutral, and at worst, as physically capable of determining the course of (or hindrance to) progress. There is recognition of political conflict in the social and collective efforts that are required to build schools in discourses of a 'collaborative' planning process (Goldberg, 1991) particulary when it comes to 'collaboratively planning' in reform discourses of 'restructuring' schools (Moore & Lackney, 1994).

A political dimension is implicit in debates about different designs. While ideas of architectural design appear to fit educational reforms of curricular organization and instructional methods, the equation of space to it's intended physical functions becomes a little harder to justify. With the equation of space to physical functions, school designers encounter difficulties in empirically substantiating claims about the impact of different architectural models on measures of student achievement, self-esteem, and social interactions (Duke, 1998). According to some arguments, outmoded definitions of achievement or assessment instruments require redefining the setting in which the measurements are derived. For example, assessment procedures that require setting aside a block of time and having students sit quietly in rows of desks to individually complete standardized tests does not fit new values of 'active' learning or the capacity to collaborate upon learning projects (Goldberg, 1991).

Rather than take a position on particular architectural design models, I suggest that we look at some of the underlying reasonings that support current debates about school design and issues of 'active' learning, 'flexible learning environments,' and 'personal' relations in the school-as-community. Disparate psychological discourses of multiple intelligences and learning styles converge with planning and administrative discourses; conceptual elements of socialization discourses from the early part of this century, such as the intimate and personal "primary group,"

are remobilized with pedagogical relations of cooperation and collaboration. The school-as-community represents a juncture of 'new' discursive-practical reasonings.

While the idea of 'community' is not new (see, e.g., Franklin 1986), today there is a sense that the components and dynamics of communal, inclusive, social life are known, can be planned for, must be taught, and ought to be built into the physical environment. Phrases such as the 'learning community' of the school or the need to instill a 'sense of community' in students freely circulate in the literature. Rather than superficial semantic changes, the phrases represent a shift in reasoning about how to prepare students for the responsibilities and obligations of citizenship. The turn to 'local' and 'community' as a way to frame social issues is not limited to educational discourses; discourses of social theory, political theory, and urban planning, for example, deploy the notion of community (see, e.g. Morris, 1996). Moreover, the turn to 'community' encompasses rationalities that are not peculiar to any nation, but rather the rationalities embody a wider ethos of government.[1] The diverse invocations of 'community' signify a reconfiguration of multiple discourses that has lead scholars to ponder the changes occurring in 'governmentality,' in the governmental reasoning of diverse expert/technical/practical knowledges (e.g. Barry, Osborne and Rose, 1996).

Current appeals to 'community' signal a discursive shift that relocalizes self-government. The 'site' of 'community,' as Nikolas Rose argues, is a discursive space of new moral relations in which individuals have obligations and allegiances to multiple and heterogeneous communities (Rose 1995, 1996). Community becomes a micro point of management of a variety of overlapping networks which are no longer anchored in the physical space of land nor in the ordered spaces of society. The 'community' in this context becomes a project of political reflection which realigns the capacities and aspirations of the citizen with the aims of government (Popkewitz 1996).

II. Two Uses of 'Space': a Space of 'Political Reasoning' about the Space of the 'School'

The distinctions I make in uses of the word 'space' are meant as analytic tools that enable conceptual linkages that would otherwise be awkward or misconstrued with a unitary notion of 'space.' Recognizing multiple uses of the term 'space' provides a way to flush out meanings that frequently are misrecognized, devalued, or omitted in educational reform discourses. Popkewitz (1997) writes that in current scholarship, metaphors of discourse and texts, as well as geographical concepts of 'maps,' 'discursive fields,' 'regionality,' 'localities,' 'terrain,' 'imagined communities' and 'institutional geographies' are introduced in discursive analyses to understand how spatial logics and temporal logics coincide. The attention given to space is not a concern solely with a geographical idea of physical location but also as a way to understand the rules and standards of reason through which the subject is "continually 'made' through the formation of social spaces" (Popkewitz, 1997, p. 23). Reference to the 'territory' of government or to the 'site' of community identifies a discursive space in which the citizen as subject is continually made and remade.

A 'discursive space' introduces certain types of questions that entail rethinking ideas of history or progress. Isolating a discursive space makes intelligible the ways in which discourses emerge, appropriate from, join with, or alchemize existing discourses into hybrid concepts, individuals, things, techniques, and practices. Discursive practices of school building and design are contiguous and concurrent; they emanate from multiple directions out of multiple aims, disputes, and strands of discursive practices, each of which have different trajectories and rates.

Analyzing the governmental reasonings of such practices provides a way to describe regularities and to compare or contrast regularities of different historical junctures. The analysis breaks out of a sense of linear and total history in which inferred causal relations lead to a notion that 'discourse' somehow saturates and binds the space of the school, leaving no room for anything else.

The discursive space of the 'school,' in this discussion, refers to the convergence and confluence of multiple discourses that mobilize our reasonings and justifications for educative actions. An analysis of discourses of school building, then, does not attempt a total inventory and cataloguing of how all schools 'actually' were or are now being built; nor does it entail questions about what classroom practices 'actually' were or are. Instead, a discursive analysis emphasizes the fields of representation and the systems of reasoning that inform the design and ordering of the 'school.'

An enduring reasoning about design has been the deployment of 'space' as a built environment. In current educational scholarship, the 'space' of the school is equated with geographic concepts of physical location or context, such as ethnographic, psychometric, and affective studies of the child within the context of the school environment. The very notion of 'physical space' having *a priori* functions and effects is problematic because it suggests a non-culturally specific, ahistorical and naturalistic conception, a conception that is contested, for example, by geographers (e.g., Gregory, 1994; Harvey, 1989; see also Kirby, 1996). Nor can we assume that the category of space has not attracted political interest. At the end of the eighteenth century, new conceptualizations in theoretical and experimental physics began to consider a politics of space (see Toulmin, 1990). 'Space' became doubly invested with political and scientific reasonings (Foucault, 1980). Engineering sciences were thought of as too technical and too practical to be considered intellectual or philosophical. Moreover, the technical knowledges were thought of as too remote from social and political reality to be considered political (Barry, 1996). The engineering sciences had a political *usefulness* in liberal discourses by being devoid of political content. The presumed neutrality of technical/practical knowledges such as engineering enabled the state to stay out of the daily lives of citizens and yet build an infrastructure to organize populational relations.

Numerous studies in educational research have fruitfully used Foucaultian (1979) concepts, such as 'disciplinary power' and his conceptualization of its diagram--the 'panopticon'--to politicize the space of the school (e.g. Shore & Roberts, 1993; Heilker, 1994; Deever, 1991). Fortunately, while these studies aren't ordinarily found in architectural literatures, they have amplified the analyses of schools through their examinations of spatial relations and power. The use of concepts from Foucault's work has launched a multiplicity of sites in which scholars interrogate specific assumptions and intervene in prevailing practices. Important and timely critiques of school social arrangements offer examples of how to make the spatial arrangements of schools more equitable. However, concepts such as the 'panopticon' mainly have been appended to 'critical' approaches.[2] With a repressive notion of power and a linear notion of history, criticisms point to the manner in which "the school allegedly reproduces social relations, by detouring human capacities into the forms required by middle-class hegemony, capitalism, racism, patriarchy and other enemies of complete human development" (Hunter, 1996, p. 144). Frequently, the critical literatures assert that panopticism or disciplinary power work to restrict student empowerment and to undermine the potential for resistance, or that discipline and

surveillance are destructive to 'true' learning. 'Space' remains at an ontological and phenomenological level.[3]

My purpose for questioning ontological and phenomenological assumptions of 'space' is to question the elision of political discourses and scientific practices that have arisen around the questions of governing populations and bodies. Political and scientific practices have inscribed discursive domains for the problematization of the body to create a self-governing population. I question ontological and phenomenological assumptions about 'space' that have enabled liberal governance 'at a distance.'[4]

The discursive domain of the 'school' has been and continues to be a political reflection upon how to enclose a segment of the population and to order and relate members of the population in an educative way. I am interested, therefore, in those practices that arose from efforts to act upon our sense of locating our body and our 'mental' and 'physical' individualization. Furthermore, I am interested in understanding how shifts in those practices have altered the constructed physicalness of how we locate and identify ourselves. While I refer to the physical arrangements of the school, the school is resituated as one of the historical-political problematizations of a specific age-segment of the population with the aim of citizenship. Historical-political problematizations of the 'space' of the school delineate an area for introducing questions about history, progress, freedom and power.

III. The Convergence of Multiple Governing Discourses in the Common School-House[5]

It may be proper to remind the reader, that by education, we understand a system of training and instruction, which aims at the due culture of all the powers of the soul, both intellectual and moral.
--Alonzo Potter[6]

Frequently, an evolutionary line is drawn from the architecture of monitorial schools to present practices in arguments that are critical of social inequalities and exclusion. The arguments deploy the 'panopticon' of monitorial methods to demonstrate hegemonic powers (see, e.g. Markus, 1993). The design of school-houses in common school discourses, however, represents a rupture with monitorial practices, particularly around the issue of surveillance. Certain elements of supervisory and disciplinary relations of monitorial schools were adopted in U.S. common school discourses.[7] However, by switching to governmentality as a field of analysis, the analysis can register some of the discursive practices of common schools that distinguished it from other popular schooling methods.[8]

Technologies of power and technologies of the self organize a framework for analysis.[9] By technologies of power, I mean the ensemble of actions and practices that organized knowledge with the aim of structuring the field of possibilities in which several ways of behaving, several reactions and diverse comportments may be realized (Foucault, 1978, 1983). By technologies of the self, I refer to those techniques by which the individual comes to know the self, the ensemble of actions by which the individual effects self-governing. The relations of power and knowledge have been characterized as the transference of the soul to the governance of science (Popkewitz, 1998). To organize my description of the common school-house, I point to three analytic dimensions of common school discourses: (1) the goals of learning and the organization of subject matter which I call the curricular design; (2) the organization of

instruction to produce learning, here called the system of pedagogical action; and (3) the basic units and organization of pedagogical action that constitute spatial relations.

The aim of common schooling was to produce virtuous, self-governing citizens by inculcating 'moral character' (Barnard, 1848; Potter and Emerson, 1842). In contrast to training for "blind obedience," Horace Mann argued that "[o]ne of the highest and most valuable objects, to which the influences of a school can be made conducive, consists in training our children to self-government (excerpted in Cremin, 1957, p. 47). The design of the curriculum was intended to inculcate 'understanding' and 'moral character' rather than simply memorization and scholarly recitation (Alcott, 1832; Potter & Emerson, 1842; Mann, 1845; and Barnard, 1848).[10] Discursively, the combination of faculty psychology with moral philosophy emphasized intellectual powers, habits of thinking, judging, reasoning, and communication (Hamilton, 1989, p. 87). The student "must be instructed by reflection on the operations of his own mind" (Potter & Emerson, 1842).

The design of the curriculum was believed to have a proper sequence of instruction in the different subjects, but to fully develop the faculties, knowledge needed to be subdivided into increments in a way that a child could 'understand.' Curricular organization was difficult because 'class' referred to the various books on grammar, geography, or history that students brought with them to school. A teacher might be responsible for as many as fifty or sixty 'classes' (ie., books) which led to the impossible obligation to purchase and study a copy of each school book, and the even more impossible task of hearing fifty or sixty individual recitations.[11] In a problematization of population and government, reformers recommended the adoption of 'appropriate' school texts, arranged in a series to consolidate the number of classes (Potter & Emerson, 1842; Mann, in Filler, 1965).

Common school discourses recommended a system of pedagogical action that I refer to as an interrogatory-conversation. In order to inculcate understanding, the teacher was encouraged to engage in conversation about the subject matter with the student and to"lead him [sic] to ask, as well as answer, questions; and be careful not to let your own words lose their animation, and become mere lecturing" (Potter & Emerson, 1842).[12] To illustrate the system of pedagogic action that I call an interrogatory-conversation, I use Emerson's directions to teachers in the following manner. To exemplify the benefits of conversational and questioning techniques, Emerson chose one of the more difficult geography lessons, stated as this axiom: "The annual revolution of the earth round the sun, in connexion with the obliquity of the ecliptic, occasions the succession of the four seasons" (Potter & Emerson, 1842, pp. 408-409). The practice of having students memorize and recite natural laws was displaced by the import of Pestalozzian pedagogical strategies that emphasized simple conversational language. Emerson described the beginning of the lesson like this:

> What are the seasons?" you [the teacher] may ask. "All who know may hold up their hands." All hands are up. Some individual is told to answer, and says, "Spring, Summer, Autumn, and Winter." What is meant by the succession of the seasons?" [An individual is called upon] "First comes Spring; then Summer; then Autumn; then Winter." "What is the difference in the seasons?" [Another individual is called upon.] "In Summer it is very hot." "And what is it in Autumn?" (Potter & Emerson, 1842, pp. 408-409).

Common school reformers advocated an interrogatory-conversational pedagogy to go beyond the limited information taught by simple memorization and recitation.

The above excerpt helps to illustrate how the basic pedagogical unit in a system of interrogatory-conversation was the individual student within a 'class': "A teacher well versed in the better modes of instruction, which are beginning to be adopted, will, in most branches, *teach each one, of a class of twenty*, more in the same time than he could teach any one individual of the same class" (Mann, in Filler, 1965, p. 68, my emphasis). The *simultaneous* instruction of twenty individuals did not necessarily require that all members of a class respond in unison; rather, the emphasis was upon gaining and holding the simultaneous attention of all pupils through teacher questioning so that both listeners and speakers learned; "all listen and learn" (Hamilton, 1989, p. 105).

Grouping students in classes for study, recitation, and simultaneous instruction required new organizational methods. One option was the popular school method in Germany organized around the *Facher* system. Large towns could support a *Facher* system of having multiple teachers in separate rooms for separate studies, such as writing, reading, geography, history, mathematics, and music teachers (Potter & Emerson, 1842; see also Barnard, 1848). However, the system of separating subjects in different rooms could not be used in more sparsely populated country districts in the U.S. More importantly, reformers feared that teachers of only one subject would "feel too little responsibility for the moral culture of their pupils" (Potter & Emerson, 1842, p. 224).

In the U.S. multi-room schools were built, sometimes to separate older from younger students, sometimes to separate reading and writing instruction (Hamilton, 1989). Both multi-room school-houses and one-room school-houses used the school room as the basic organizational unit for pedagogic action upon several 'classes.' The basic pedagogical unit was the individual student.

Technologies of power and technologies of the self joined the ensembles of surveillance and discipline to strategies of questioning and conversing. Since the teacher could not look directly into the character of the child, "we must take advantage of the conclusions to which [children] have come from *the study of their own character* (Potter & Emerson, 1848, p. 274, my emphasis). In this reasoning, an interrogatory-conversational pedagogical system constituted intellectual and moral capacities of the "soul" that could only occur through the cultivation of character, through techniques of reflecting upon one's self, to studying the self for understanding, to studying one's character.

The reasoning that governed common school discourses did not originate with the reformers, but rather, the rationalities, practices, and techniques emanated from multiple sources, from multiples knowledges, architectural designs, and organizational strategies. The historical-political problematizations in common school discourses built the school-house as a governmentalized space.

IV. A Shift in Governmental Reasoning: Population and 'Planning' the 'Future'

As school districts started to build multi-room classroom schools at the turn of the century, the classroom school became more prevalent than the school-house. By the 1930s the emergence of discourses of the school-plant represented a shift in reasonings that had to do with a reproblematization of population and governing, and with the emergence and 'merging' of building discourses with discourses of city 'planning.' An alchemy occurred as the discourses of

educational science and organization merged with 'planning' discourses. In this section, I focus on how the merger of discourses effected techniques and practices to systematize, serialize, standardize, and eventually, to individualize school-plants.

(a) Normative statistics and demographic predictions: The systematization and serialization of school-houses into age-graded classroom schools was contingent upon the rise of psychometric discourses of intelligence, psychological discourses of developmental age and behaviorism, and managerial discourses of Taylorism (Fendler).[13] The age of the individual student placed the student in a field of normative reasoning that both located the student within the school and prescribed educative action, thereby justifying the classroom design model, and also providing the scientific justification for serializing schools into a linear age-graded system (see, e.g., American School and University, 1928, for the ways in which educational sciences and 'school-age' is taken for granted). Teachers, classes, and rooms moved into a one-to-one relationship in which a teacher became in charge of a single 'class'room in contrast to the previous school-room (Hamilton, 1989). The "primary unit of a school building is the classroom" (Dresslar, 1925, p. 11) while the basic pedagogical unit remained the individual student. A temporal logic was imposed upon these arrangements: an entire class was promoted to the next class on an annual basis.

To achieve a system of building schools to fit the age of the student population depended upon design and construction norms and upon developing means for making schools appropriate for future generations (Dresslar, 1925). One of the main construction standards had to do with classrooms within a building, and with different ages broadly differentiated as 'elementary' and 'secondary.' Educational designers argued that elementary classrooms should be of uniform size and orientation; the secondary school, on the other hand--as a modification of the *Facher* system--should vary the room sizes to fit different subject-matter and the variable enrollment in the more specialized studies to include, for example both work shops and chemistry labs (American School and University, 1928).[14] At the same time, the school-plant adopted the enlarged sense of what constituted schooling by delineating areas to include cafeterias, auditoriums, gymnasiums, and athletic fields--none of which were areas advocated for all schools in early common school discourses. The standards pertained to a variety of aspects, including classroom dimensions, the arrangement of athletic fields, acceptable density levels, and fire protection; the adoption of standards provided a normative system of building schools (Dresslar, 1924; Holy, 1935; Sohn, 1947; Strayer, 1928).[15]

The location of the school has been a perennial concern, and location came under normative reasoning and demographic prediction in the 1930s. For early common school discourses, the problem of location had to do with topographical dangers, such as locating the school-house too close to major roads and streets or in swampy, low-lying areas prone to flooding (Barnard, 1848). While topographical dangers (translated as environmental risks) continue to be of concern today, early twentieth century practices brought a social statistics of city-population and municipal zoning laws into their calculations. Schools districts were vulnerable to the priorities of city government and it made no sense to educators to locate the school in a neighborhood if city planners were going to direct city growth elsewhere.

(b) Building the school-plant by 'planning' the 'future.' Discourses of designing and building schools began to join with engineering and demographic discourses of city planning (see, e.g., Holy, 1935; Viles, 1948; Herrick, 1956). 'Planning' and managing discourses adopted the technical rhetoric of the physical sciences to reason about and direct policy (see, e.g.,

Friedmann, 1993; Boyer, 1983). Two contrasts between discourses of school-plant *planning* to discourses of school-house *plans* can be made, one with regard to the rise of social statistics for governing population; and the other having to do with notions of historical change.

In a 'merger' of school-plant planning and city planning, surveys of school-plants differed statistically from earlier studies, such as Henry Barnard's compilation of school-house plans in 1848. One advocate of 'planning' argued that "qualitative" reports were not enough, and he urged the adoption of "objective" data collection (Holy, 1935, p. 27). School-plant planning discourses reasoned that the demographic characteristics of the school and of the neighborhood should be tabulated and brought into the process of 'planning.' The gathering of demographic data included populational density, the number of families, the ages of children, rates of residential turn-over, modes of transportation, and calculations of ideal distances to coordinate the series of schools for a given school district.

The aim of planning was tied to a shift in reasoning about historical change and progress. Rather than restrict planning to the immediate future, which characterized earlier educational reports on school-houses, it was argued that schools needed a systematic program:

> School plant planning is an effort to draw up a *continuous long-term program in the light of population trends, growth and expansion of the city, financial capacity of the community, and growing conceptions of the place of the school therein*--with the *end in view* of securing maximum safety and educational possibilities for children, and providing maximum service to the community (Holy, 1935, p. 3, my emphasis).

While reformers of the common school looked to the past, to a heritage and lineage of achievements of civilization which the common school was supposed to express as self-government, their school plans were simply the blueprints for construction and 'improvement.' By the 1930s, in a 'future' discourse of planning, the "end was in view." The future was thought to be rationally plan-able and manageable as long as there were a "long-term program."

Stated differently, there were different temporal logics or historicities in discourses of a 'plan' and of 'planning. The historicity of common school discourses thought of the past as having necessary relations with the present, constituting a line of development between past and present. The goal was to improve upon the present. In planning discourses, the temporal logic posited a *necessary future* along the continuous line of development in which the goal became one of prediction and management. The purpose for studying the past and present in planning discourses, unlike plans for the school-house, was to discover the natural and developmental laws by which to reach policy decisions and organize actions.

There are three main implications of the shifts in governmental reasoning. First, a shift in temporal logics of planning informed the spatial logics of temporally ordering the school-plant and the sequence of school buildings in 'space.' It wasn't 'necessary' or 'natural' for schools to be built as a series of age-graded buildings, arranged in sequence, and delivered to the right neighborhood location. The presumed naturalness of the spatial ordering of schools, indeed, was questioned by concurrent concerns in social discourses of cohesion, harmony, and a renewed concern for social progress in which the 'individual' became a unique and 'essential' contributor in social theory (Franklin, 1986; Kliebard, 1992). 'Planning the future' conflicted with concurrent aims of schooling.

Furthermore, meritocratic arguments asserted that movement through a linear curriculum was believed to be unresponsive to the merits and interests of the individual student if promotion of whole classes was the only way for the individual to advance (Hamilton, 1989). As the role of teacher as 'specialist, 'professional,' and ameliorator of social change became articulated in the 1950s, discourses of "individualized instruction" and the open plan school advocated different design features so that "innovative" and "experimental" teachers would be able to provide instruction to fit individual interests, talents, and needs (Perkins, 1957). In a direct criticism of a system of school-plant building, one educational designer wrote:

> [O]f all the vices of traditional school design, the one which most acutely galls the experimental educator today is the constraining effect on the educational program itself. "A school house is a big box filled with the equal-sized little boxes called classrooms," wrote one educator in a passage which has become the touchstone of reform in school design. "The very architecture sorts the children. It helps the administration to establish groups of uniform size--25 pupils if the community is rich, 35 if it is poor, and 50 if it doesn't care. In each box is placed a teacher who will be all things to all children all day all year" (Gross & Murphy, 1968, p. 15).

We can read the shift in emphases--away from a classroom school-plant that built spatial arrangement as a big box --not as an historical step of progress. The criticism of the classroom school-plant points to the inessential relations of "development" and the spatial relations of the 'built environment.' A reproblematization of population at mid-century is picked up by current discourses of the school-as-community. The historical-political problematization of the classroom school-plant enfolded previous conceptualizations of learning and understanding in which the individual was the basic unit of pedagogical action.

A second implication of the shift in governmental reasonings about the school is that the effort to standardize and programmatize the planning of schools, evident in other discourses of planning as well (such as urban or curriculum planning), solidified a constructed notion that space is stable. Ironically, construction standards were adopted with the 'flexible' and economical use by future generations in mind. The functional, ontological notion of space provided the platform upon which temporal logics were free to envision and plan a future (see, also, Popkewitz, 1997, for a social epistemology of educational research). The arrangement of classrooms in an age-graded developmental sequence, the arrangement of school buildings in a developmental sequence, and the demographic predictors of populational development--as a knowable 'future'--became a space that educational discourses could take for granted.

And finally, it is important to recognize that while discourses of development have been problematized in various fields such as history, sociology, and the physical sciences, the idea of development within an unchanging space remains a cornerstone of educational reasoning, although not without significant modification. While I have focused in this section on the reasonings and practices that have gone into the building of the school-plant as converging in discourses of 'planning' futures, in the next section I focus on the shift in governmental reasonings that have expanded and multiplied the notion of development. Discourses of school building and design are contingent upon the variety of ways in which the development of the student--in the alchemy of 'planning'--became the assumed way to 'plan the future' of the

individual. In terms of historical relations, the classroom school and the open plan are deployed in discourses of the school-as-community. And while the normative reasonings in discourses of the school-plant have not disappeared, they have been enfolded into the building of "flexible learning environments."

V. "Dividuated" Development, or Has Individualized Instruction 'Come of Age' in the School-as-Community?

I ask rather rhetorically whether individualized instruction has 'come of age' to trouble the linear evolutionary line that is often used to describe the progress of knowledge. As I have argued previously, current discourses of the school-as-community have retained ontological and phenomenological assumptions about the 'space' of the school. The assumptions are important to understanding how the citizen as subject is continually made and remade through the 'forgotten' problematizations of the 'space' of the school as a link to rationalities of governing populations. I turn to some of the underlying reasonings that support current debates about school design and issues of 'active' learning, 'flexible learning environments,' and 'personal' relations in the school-as-community.

I take again as my framework the linkages between technologies of power and technologies of the self to describe three analytic dimensions: (1) the goals and the curricular design; (2) the system of pedagogical action; and (3) the basic units and organization of pedagogy that constitute spatial relations. It is helpful to remember that in discourses of common school-houses, the aim of schooling was to train children to self-government. The organization of the subject knowledges was in 'natural' increments of knowledge to which the study of memory and understanding were aligned. The system of pedagogic action operated on the individual student, in simultaneous instruction, through interrogatory-conversational techniques. The discursive-practical reasonings in an interrogatory-conversational pedagogical system constituted intellectual and moral capacities of the "soul" that could only occur through the cultivation of character, through techniques of reflecting upon one's self, to studying the self for understanding, and assessing one's character.

Today, the discursive-practical reasonings enfold the common school goals of faculty intellects, self-cultivation, and citizenship into a "flexible learning environment." Recent analyses of the techniques, strategies, and reasonings that govern educative action can be contrasted to common school-house discourses (e.g. Fendler, 1999; Hammerberg, 1999). The aim of schooling today can be characterized as teaching students to be goal-oriented, active, flexible, cooperative, and to invest themselves emotionally and personally in the community both inside and outside the school.

The curricular design depends upon the construction of new 'inner' dimensions and capacities that have been identified in sciences of developmental psychology which have become, in turn, the way to derive developmentally appropriate curricula (Fendler, 1999). Since the 1960s, the psychological study of a relatively 'narrow' field of biologically based stages of intellectual development have multiplied the 'inner' aspects of being human, of being educated, that can now be described, measured and improved. Educational experts can now assess and arrange on developmental charts an array of attitudes, self-discipline, personality, and emotional intelligence which incorporate aspects such as fears, wishes, and aspirations. During both periods of assessment and during the moment of pedagogical action, a 'profile' of the child can locate the child along various parameters of development. The profile of the student places the

student in a field of normative reasoning that both locates the student, at a given moment, within the school, and prescribes the 'necessary' educative actions.

The system of pedagogic action can be both compared and contrasted to the interrogatory-conversational techniques of the common school discourses. The techniques thought to be appropriate for 'active' learning can still be described as interrogatory-conversational, but the substance of the questions have changed and the system of pedagogic action is reorganized. Recalling the axiomatic geography lesson explaining the "four seasons," the substance of the questions had to do with what the children already knew about the seasons, upon which the teacher introduced the next increment of understanding. In current pedagogical discourses, such as constructivist pedagogies or "metacognitive monitoring," the student is asked to reflect upon and explain the personal reasons for giving an answer. Assignments to do autobiographical writings and journals, or assignments to identify with and assume the perspective of a character in a story, asks students to understand themselves as having fears, wishes, aspirations, attitudes, and to see themselves as unique individuals in a community of learners.

The system of pedagogic action has been reorganized so that the pedagogical technique 'fits' the developmental profile of the student. For instance, in literacy instruction, the developmental model identifies the reader as "emergent," or "beginning," or "mature": "[I]f readers are presumed to 'develop' through these stages, it has less to do with the 'nature' of literacy acquisition and more to do with a history of educational thought and knowledge about 'the student'" in relation to the history of 'literate practices'" (Hammerberg, 1999). The developmental level of a particular capacity or skill of the student dictates the pedagogic action. In current discourses of developmentally appropriate pedagogical strategies, 'lower' levels of development versus 'higher' levels are debated. Strategies of "direct instruction"--thought by some researchers to be appropriate for the 'delayed' reader-- is often compared to whole language or constructivist strategies for the 'normal' reader (e.g. Cassidy & Wenrich, 1998/99; Harris & Graham, 1993). Conversely, the argument is made that some strategies are prematurely relegated to 'low-level' skills, and that strategies such as "direct instruction" can be profitably used to instruct 'higher order' skills, such as critical thinking (e.g. Kolstad, Briggs & Hughes, 1992). Despite their differences, the debate takes as its common ground that pedagogical strategies should fit the developmental stages of the student.

This is not to suggest, therefore, that all pedagogic practices have shifted or that there is consensus on strategies that are considered to be appropriate in the school-as-community. My point isn't that research ought to find some way to resolve the debate. Rather we can look at a shift in the basic pedagogical and organizational unit that constitute the physicalness of the school. In the classroom school-plant, norms were calculated as a way to organize a population into a sequence of individuals. In a normative field that allowed individuals to be compared, not only to one another in a 'class' but to 'classes' in an entire school system, and by extension, to a national population, the individual was positioned within a system of differentiation that at the same time prescribed curricular design, pedagogic action, and school design, by age. 'Planning the future' assumed the future was fixed in advance by extending a temporal reasoning of 'development.'

The current shift entails a different problematic. Scholars have noted changes in the ways in which population is problematized in which temporal and spatial orderings re-divide and re-order population. The most recent shift away from a highly ordered society has been

characterized as a de-differentiation (Wagner, 1994; Lash, 1990), a de-differentiation that has been characterized as the site of "community" (Rose, 1995), or as the "active" society (Dean, 1995). [Include Dean's 'active society'] As the changes pertain to the space of the school-as-community, in which the emphasis on multiple groupings sorts students along a variety of developmental parameters, the basic pedagogic unit is no longer the individual student and the basic organizational unit is no longer the classroom.

The change can be characterized by Deleuze's notion of "dividuation" (Deleuze, 1992). The basic pedagogic unit of the school-as-community is somewhere 'in' the individual that teams of teachers monitor, locate on charts of developmental progress, and make grouping decisions on a moment-by-moment or day-by-day basis. The shift to 'community' in the school-as-community occurs concurrent to the *dividuation* of the school subject. 'Community' becomes a problematic of governing at the moment when conventional spatial arrangements of the classroom school-plant (that held age-groups of students together all year under the instruction of the same teacher) have 'opened' out into a 'flexible learning environment.' As in discourses of 'planning' the school-plant, the space of the school wasn't made 'freer' by designing schools to be more 'flexible.' It is important to recall that 'flexible' was achieved through standardization, the very practice that current discourses of school design reject.

I suggest that "flexible" in current discourses be read as in reference to the classroom school; it is a relative term for re-ordering population in space and time. The idea that the space of the school-as-community has become de-differentiated does not necessarily imply a new openness and freedom from regulation. Curricular, pedagogical, and architectural discourses of the school-as-community inscribe new developmental lines of differentiation to govern educative actions. Thus, we have contiguous and concurrent practices between which there is considerable debate such as the debate about developmentally appropriate pedagogies. But the assumptions and reasonings underlying the claims have to do with a shift in governmental reasonings in which spatial logics and temporal logics recombine.

Using governmentality as an analytic field breaks out of a sense of linear and total history in which inferred causal relations lead to a notion that 'discourse' somehow saturates and binds the space of the school, leaving no room for anything else. The reasonings that govern current discourses do not originate with the reformers and designers, but rather, the rationalities, practices, and techniques emanate from multiple sources, from multiple expert/technical/ practical knowledges, architectural designs, and organizational strategies; a confluence of discursive practices that the theory-practice binary obscures. The historical-political problematizations in common school discourses built the school-house as a governmentalized space. The 'space' of the school-as-community is remaking self-government, remaking the citizen.

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Endnotes

[1] There are particular ways in which social issues of justice, equality, and inclusion are articulated in national contexts. Silver (1994) provides a detailed paradigmatic analysis of "inclusion" that pertains to different national and theoretical perspectives.

[2] I make a distinction between an exemplary critique, such as Foucault's deployment of "panopticism" to identify a modality of power, and a normative critique which seeks an authoritative ground upon which to evaluate and legislate practices and modes of freedom (Owen, 1995).

[3] Jonathan Crary historicizes phenomenological assumptions about eye-sight in *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, 1993. With regard to architectural discourses, Foucault cautions against a technological determinism in ontological assumptions about architecture as being an exact mirroring of relations of power (1984, p. 255).

[4] In previous work, I have developed an historical analysis of the discursive inscription of relations of the 'local' and the 'national' in which visions of the 'local' came from particular New England practices and became governmental principles for mapping, peopling, and settling the North American continent during U.S. imperial expansion (Hennon, in press).

[5] We should read 'school-house' and 'school-room' in common school discourses of the 1830s to the 1890s as nearly synonymous, for "commons schools" could discursively refer to diverse structures such as sheds, barns, abandoned mills, old alms houses, a room or flat in a city building, and free-standing purpose-built 'houses' in the country districts (Alcott, 1832; Barnard, 1848). In 1891, a school was located in the upper storey of a police court in which students shared the same entryway with prisoners (Boston Committee on School-Houses, 1891).

[6] *The School and the Schoolmaster*, 1844, p. 91.

[7] It is important to acknowledge that geographically, discourses of the common school during the 1800s emerged primarily from the northern and eastern tiers of the U.S. This is due partly to the settlement patterns and demographic shifts leading up to the American Civil War (see, e.g., Meinig, 1986, 1993). More importantly, I read the discourses as articulating local and particular practices as the universal principles of schooling as a means for promoting 'self-government,' universalized principles which continue to govern reasoning about schools.

[8] Since it is Foucault's (1979) analysis of the monitorial school that lends itself to 'critical' criticisms of school design, I mention only the monitorial school. Other school models, such as gallery school-rooms, infant schools, and mutual methods were in operation (Barnard, 1848). Seaborne (1971) and Hamilton (1989) give detailed analyses of the different curricular and pedagogical practices among the variety of schools in the early 1800s.

[9] For educational applications of governmentality, see Popkewitz and Brennan (1998).

[10] This is not to suggest that all common school reformers agreed on how to promote understanding or character. In 1831, the American Institute of Instruction invited essays on the question of whether children should be required to commit to memory what they do not understand, or children should "attend first to a brief outline of a study, and then gradually to fill up that outline" (Alcott, 1831, p. 65).

[11] Pedagogical organization wasn't just a problem of organizing the various subject-matters. There were also different publications. In reference to the problem of too many "class-books," Potter writes that in one state study, there "were *more than two hundred different schoolbooks"* for spelling, reading, arithmetic, geography, history, grammar, natural philosophy, and "other branches" (Potter & Emerson, 1848, pp. 228-229, original emphasis).

[12] Boys and girls sat on different sides of the rooms; the curriculum bifurcated at 'higher' classes. While very important, the gendered organization of schooling is beyond the scope of this paper. See Abigail Van Slyck's (1996) study of gender and library architecture of the late 1800s.

[13] See Lynn Fendler (Dissertation, 1999, UW-Madison) for a discursive analysis of behavioral and developmental discourses as they related to pedagogical strategies and measurement. I thank her for our personal communications on these issues.

[14] Dresslar (1925) insisted, however, that the ready-made plans built by "hatchet-and-saw carpenters" (p. 92) could not fit the needs of all schools. Regional differences of climate, light, and local materials dictated the study of the school building always from "the educational point of view" (p. 94).

[15] The amount of space allocated for school activities were derived from medical discourses of the human body to calculate 'objective' standards. Alcott (1832) calculated dimensions of the school room based on illumination sciences, respiratory rates and the volume of air the room could safely ventillate. In the 1920s, the dimensions were recalculated to incorporate new engineering inventions for ventillation and lighting (Dresslar, 1925). Areas surrounding the school, such as a playground or athletic fields were calculated according to the square footage per child needed to fully exercise the body in calesthenic drills and to support sport activities (e.g. Holy, 1935).